

REMARKS

Claims 1-14 were examined in the outstanding office action mailed on 03/27/2006 (hereafter "Outstanding Office Action"). Applicants note with appreciation that claims 10 and 12 were indicated to be allowable. The remaining claims were rejected.

5 By virtue of this response, claims 1, 2, 7, 8 and 12 are sought to be amended and applicants seek to remove one of the cited references as prior art by swearing behind under 37 CFR § 131. The amendments are believed not to introduce new subject matter, and their entry is respectfully requested. The amendments are made without prejudice or disclaimer. Claims 1-14 are thus respectfully presented for reconsideration.

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Claim Rejections Under 35 U.S.C. § 103

Independent claim 1 was rejected under 35 U.S.C. § 103 (a) as being unpatentable over United States Patent Application 6,742,151 issued to Park *et al* (hereafter "Park") in view of United States Patent Application 6,744,285 naming as inventor Mangum *et al* (hereafter "Mangum").

15 Applicants swears behind Mangum as provided under 37CFR § 1.131 entitled "Affidavit or Declaration of prior invention" by submitting a declaration (hereafter "declaration") according to the procedure further outlined in 37 CFR § 131(b) and MPEP § 715.05 III. As noted there, one of the ways to swear behind requires a showing:

20 Conception of the invention prior to the effective date of the reference coupled with due diligence from prior to the reference date to a subsequent (actual) reduction to practice.

The above requirements are believed to be satisfied by the attached declaration and exhibits, further in view of the below remarks.

25 It is noted that Mangum has a filing date of August 08, 2002 with the US Patent Office. Thus the reference date to be overcome is believed to be the US filing date of August 08, 2002.

The enclosed affidavits signed by Mr. Rubin Ajit Parekhji, Ms Nikila Krishnamoorthy

and Mr. Anindya Saha along with the supporting Exhibits, establishes the conception of the invention of at least claim 1 prior to August 08, 2002 (the reference date to be overcome). In particular point 4 of the affidavit of Mr. Rubin Parekhji and Ms. Nikila Krishnamoorthy establishes that the invention of at least claim 1 was conceived by the inventor prior to the reference date.

5 The enclosed affidavits of Mr Anindya Saha (points 4-11 of the executed affidavit), Mr. Rubin Parekhji and Ms Nikila Krishnamoorthy (points 4-12 of the executed affidavit) establish diligence from prior to the reference date to reduction to practice of the invention of claim 1.

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Accordingly, it is believed that the Applicants have met the required burden in showing a date of invention prior to the effective date of the Mangum reference. Withdrawal of the Mangum reference as effective prior art is therefore respectfully requested.

15 With respect to Park, it is the applicants' position that Park does not appear to teach

or reasonably suggest at least some of the features of independent claim 1 as explained below.

Independent claim 1 recites:

20 A method of facilitating testing of a plurality of modules in an integrated circuit, said plurality of modules comprising a first module and a second module, *wherein data is transferred on a path connecting said first module to said second module*, wherein said first module and said second module are to be operated together during said testing such that said second module operates using a second one of a plurality of characteristics of a first control signal when said first module is operated using a first one of said plurality of characteristics of said first control signal, said method comprising:

25 *providing said second module with a capability of being tested in each of said plurality of characteristics of said first control signal;*

providing a programmable field, which can be programmed to generate a derived control signal having a desired characteristic the same as said second one of a plurality of characteristics, wherein said derived control signal is generated from said first control signal by programming said programmable field; and

30 wherein said derived control signal of said desired characteristic is provided as a control signal to said second module and said second module is tested with said

desired characteristic of said first control signal by programming said programmable field,

5 whereby said testing is facilitated even when said second module is designed for operation using a characteristic of said first control signal which is different from said characteristic of said first control signal using which said first module is designed to operate.

(Currently Amended Claim 1, *Emphasis Added*)

Thus, currently amended claim 1 facilitates testing of at least a first module and a
10 second module involving transfer of data on a path connecting said first module to said second module.

Park does not appear to teach such a feature. It does not appear that any data is being transferred among any of modules core (30), UDL (40) and core (50) (See Figure 1 of Park), relied upon in the Outstanding Office Action.

15 Further, the second module according to currently amended claim 1 is capable of being tested in each of a plurality of characteristics of the first control signal.

In contrast, UDL 40 of Park, which has been equated to the "second module" of claim 1 in the Outstanding Office Action (see page 4, line 1), appears to have a pre-determined and fixed scan style, as also do modules 30 and 50. In support of these positions, applicants now
20 point to relevant portions of Park:

25 ...In order to attain the above objects, and according to an aspect of the present invention, a semiconductor integrated circuit is provided that comprises a first logic block *adopting a first scan style*, having a plurality of first scan cells for testing the semiconductor integrated circuit; a second logic block *adopting a second scan style*... ("Summary of the invention", column 2, lines 26-31 of Park, *Emphasis Added*)

The first core 30 is *designed to adopt a multiplexed-scan scan style*; the *UDL 40 is designed to adopt a clocked-scan scan style*; and the second core 50 is *designed to adopt an LS&SD scan style*.

(Column 5, lines 34-36 of Park, *Emphasis Added*)

30 Thus, each of the modules 30, 40 and 50 of Park is designed to adopt a corresponding (fixed) scan style. This is further illustrated in the timing diagrams of Figures 4, 6 and 8 of

Park. It may be observed from these figures that the corresponding scan signals for each of modules 30, 40 and 50 appear to have the same characteristics in each of Figures 4, 6 and 8.

5 Hence, contrary to the feature noted above of amended claim 1, there appears to be no teaching or suggestion in Park that a “second module” is provided “with a capability of being tested in each of said plurality of characteristics of said first control signal”.

Thus, independent claim 1 is believed to be allowable over Park. Dependent claims 2-6 are believed to be allowable at least as depending from allowable base claim 1.

Currently amended independent claim 7 recites:

10 An integrated circuit designed for testing of a first module, wherein said first module is to be integrated into said integrated circuit, wherein said first module is designed for operation using a first one of a plurality of characteristics of a first control signal, said integrated circuit comprising:

15 a second module *provided with a capability of being tested in each of a said plurality of characteristics of said first control signal, said second module being coupled to said first module by at least one path;*

a test logic being programmable to generate a derived control signal having a desired characteristic, wherein said derived control signal is generated from said first control signal, and

20 wherein said derived control signal of said desired characteristic is provided as a control signal to said second module and said second module is tested with said desired characteristic of said first control signal by programming said test logic,

whereby said test logic facilitates testing of said first module and said module involving transfer of data on said at least one path between said first module and said second module even when said second module is designed for operation using a characteristic of said first control signal which is different from said characteristic of said first control signal using which said first module is designed to operate.

(Emphasis Added)

For reasons similar to those noted above, Park does not teach or reasonably suggest 30 at least the above highlighted features of currently amended claim 7. Thus, amended claim 7 is also believed to be allowable over Park.

Dependent claims 8-14 are also allowable at least as depending from allowable base claim 7.

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Thus, it is believed that all objections and rejections have been overcome, and applicants respectfully request their withdrawal. The Examiner is invited to telephone the undersigned representative at 707.356.4172 if it is believed that an interview might be useful for any reason.

Respectfully submitted,

/Narendra Reddy Thappeta/

Signature

Date: August 14, 2006

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